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DEPARTMENT OF THE NAVY

NAVAL UNDERSEA CENTER

SAN DIEGO, CALIFORNIA 92132

IN REPLY REFER TO:

4002/CSJ:sn 14 January 1974

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Dear Earl:

I have received both "Shark Screens" and spent sometime Saturday in the swimming pool testing them while using the USAF LPU2/P life preserver.

My first conclusion is that with this life preserver the dimensions of the Shark Screen can be reduced considerably. I will return to the dimensions later.

I was very much impressed with the construction of the first bag made from the thin material. There are only two suggestions. First, the valves used in the second bag were better and second, construction can be simplified by making a curved seam at the bottom rather than fitting a circular piece of material to make the bottom. The circular bottom deploys somewhat better than a semicircular seal but it's more complicated to build and will not package as well.

Getting back to dimensions, I have enclosed a sketch of what a "Shark Screen" would look like with minimum dimensions for the LPU2/P preserver with the following additional comments:

- In order to reduce package size, I recommend that only one inflatable ring be used, the lowest one. Instead of the upper two rings, a single thickness of the same material used on the bottom part should be used with twelve gromet holes and a draw string. With the reduction in dimensions indicated on the sketch, the volume of materials needed should be reduced by one-third.
- 2. The material used for the entire bottom part of the bag should be the aluminized mylar with black polyester over the aluminized side, black side out, shinny side in.
- 3. The inflatable ring should be made of mylar coated with black polyester only. No aluminizing on this material. As with the first one produced, the inflatable ring should be partially sealed or tacked together periodically around the circumference so that the ring will hold a circular shape when inflated.

Navy review(s) completed.

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- 4. Use screw type closing valves similar to those used in the second bag.
- 5. Make a semicircular seal at the bottom of the bag rather than fitting a circular bottom to the bag.
- 6. The dimensions indicated on the sketch will reduce the amount of material in the "Shark Screen" to two-thirds of what it was in the first device.
- 7. Vacuum packing should be used to reduce final package size to the minimum.

Please don't hesitate to call if you have any questions or if there is anything I can do.

Sincerely/yours.

C SCOTT JOHNSON

Enclosure

